

instar nymphs taken by Dr. Beamer on August 31. They have the same striking color as the adults. In one of the Kansas females the hemelytra are somewhat intermediate in development, being as long as the entire pronotum and having a distinct, but small membrane.

A List of Maryland Odonata.

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A collection of dragonflies made by the author contained some new distribution records for the state of Maryland; therefore a list of the collection seemed to be of interest. The collection was made mainly around Baltimore, but other places in the state where I have made collections are included for completeness.

I have given below a short description of some of the collecting stations:

In Baltimore City:

Roland Park—polluted streams.

Govans at Woodburne Ave.—a spring fed pond and small marsh.

Mt. Washington at Cross Country Blvd.—tiny swamp and pond in woods.

In Baltimore County:

Piney Creek near Bacon Hill—a meadow with brook and small marsh.

Pretty Boy—city reservoir and large woodland stream.

Shawan—a meadow brook.

Beaver Dam Stream—a clear woodland stream.

"The Caves", Eccleston—old ore bank.

"Soldier's Delight", Delight—a serpentine barren area with clear brooks.

Avolon—Potapsco River.

Dead Run near Colonial Park and Woodlawn—a sluggish stream.

Lock Raven—city reservoir and steams draining into it. Cromwell Bridge is on its large fluctuating outlet.

Lake Roland—artificial lake.

In Harford County:

Bush River—estuary of Chesapeake Bay.

In Frederick County:

Ridgeville—a marshy meadow.

Frederick—goldfish ponds.

In Anne Arundel County:

Swan Creek—salt marsh near Ft. Armstead.

Lakeshore—pitcher plant bog.

Waterford—old mill pond.

South River—at head of tidal water.

In Calvert County:

Governor's Run—beach with seepage from cliffs and small wooded ravines cutting through the cliffs.

In Kent County:

East Neck Island—a salt marsh.

Species recorded by other authors are listed for completeness. The author and date of publication alone are given within square brackets, the full reference being obtainable from the Zoological Record; the locality and the date from the original.

The number and sex of the specimens taken is shown below except for the commonest species which are represented by numerous specimens of both sexes, the word "common" referring to ten to twenty-five individuals captured, "very common" referring to any number above twenty-five. In the case of a few species, which are difficult to capture or rarely seen but easily recognized on the wing, I have included additional localities where I have seen the species but have not captured them; these are always listed as "seen" and further set apart by round brackets. Widely distributed and extremely common species are listed without specific localities (as *Agriion maculatum*, *Plathemis lydia*, *Ischnura verticalis* etc.).

FAMILY AESHNIDAE.

Petalurinae.

1. TACHOPTERYX THOREYI (Hagen). Beaver Dam Stream near Cockeysville, Baltimore Co., July 23, 1 ♂; Governor's Run, Calvert Co., July 7, 1 ♂; (seen Octoraro Creek, Cecil

Co., June 17 and Pretty Boy, Baltimore Co., June 20.) [See Hagen 1861, 1875, Banks 1892, Calvert 1893.]

The following notes were taken near Ithaca, New York, but indicate a characteristic habit of this species:

"We found this species in large numbers in Coy Glen, a deeply wooded narrow gorge. Males and females coursed up and down the gorge bottom, usually just above the level of our heads. They rested on the tree trunks where they were almost completely camouflaged. We soon learned where several favorite resting spots were and thus we were able to distinguish them from their surroundings. They would flatten their wings and abdomens against the tree and remain motionless while we quickly swung the net over them. Often the net would sweep right over them without disturbing them because they were so closely pressed to the tree and seemed to rely so implicitly on their camouflage."

Gomphinae.

2. *HAGENIUS BREVISTYLUS* Selys. Dead Run, Colonial Park, Baltimore Co., July 18, 1 ♂; (seen Shawan, Baltimore Co., June 8). [See Hagen 1875, Banks 1892, Calvert 1893.]

3. *OPHIOGOMPHUS MAINENSIS* Packard, Shawan, Baltimore Co., June 6-8, 9 ♂.

This is the southernmost record for this species. The males rested on grasses and reeds that directly overhung the water of a clear meadow brook. They were absent at this locality when revisited on July 14.

4. *GOMPHUS (GOMPHURUS) PARVIDENS* Currie. [See Currie 1917.]

5. *G. (GOMPHURUS) VASTUS* Walsh. [See Hagen 1875, Banks 1892.]

6. *G. (STYLURUS) PLAGIATUS* (Selys). [See Hagen 1875, Banks 1892, Calvert 1893.]

7. *G. (GOMPHUS) GRASILINELLUS* Walsh. [See Muttkowski 1910.]

8. *G. (GOMPHUS) EXILIS* Selys. Dead Run, Colonial Park, Baltimore Co., June 4, 2 ♂ and 2 ♀. [See Hagen 1861, 1875, Banks 1892, Calvert 1893.]

In copulation June 4, resting on rocks in midstream or in the field.

9. *G. (ARIGOMPHIUS) VILLOSIPES* Selys. Bush River, Harford Co., June 3, 1 ♂; (others seen resting on bare rocks, logs, etc.)

This is a new state record.

Aeshninae.

10. *GOMPHAESCHNA FURCILLATA ANTILOPE* (Hagen). [See Hagen 1874, 1875, Banks 1892, Calvert 1893.]

11. *BASIAESCHNA JANATA* (Say). South River, Anne Arundel Co., May 6, 10 ♂.

A female, unaccompanied by the male, was seen laying eggs on the submerged stems of the Arrow Arum. The males were coursing up and down the edge of the open water in a marsh at the head of tidal water, several individuals following the same beat. Absent at this locality on July 1.

12. *BOYERIA VINOSA* (Say). Beaver Dam Stream, Cockeysville, Baltimore Co., July 22, 2 ♂; "Soldier's Delight", Delight, Baltimore Co., Sept. 25, 3 ♂; (seen on wooded hill top at Long Green Run, Hartley, Baltimore Co., July 20.) [See Hagen 1861, 1875.]

These dragonflies were taken resting on rocks and trees.

13. *ANAX JUNIUS* (Drury). Common about practically all ponds and lakes or foraging over meadows, May 6—Oct. [See Hagen 1861, 1875.]

14. *A. LONGIPES* Hagen. [See Hagen 1890, Banks 1892, Calvert 1893.]

15. *EPIAESCHNA HEROS* (Fabricius). "Soldier's Delight", Baltimore Co., July 1, 1 nymph; Roland Park, Baltimore City, May 2, 1 ♀, and July 9, 1 nymph. [See Hagen 1861, 1875.]

16. *AESHNA UMBROSA* Walker. "Soldier's Delight", Delight, Baltimore Co., Sept. 25, 1 ♂, 1 ♀; Lake Roland, Baltimore Co., Sept. 24, 1 ♀. [See Walker 1912.]

17. *AE. VERTICALIS* Hagen. [See Walker 1912.]

Cordulegasterinae.

18. *CORDULEGASTER DIASTATOPS* (Selys). Piney Creek near Bacon Hill, Baltimore Co., June 6, 1 ♂; Shawan, Baltimore Co., July 1, 1 ♂; Govans at Woodburne Ave., Baltimore City, June 11, 2 ♂.

In marshy meadow land.

19. *C. SAYI* Selys. [See Hagen 1874, 1875, Banks 1892.]

20. *C. MACULATUS* Selys. [See Hagen 1861, 1874, 1875, Banks 1892, Calvert 1893.]

Family LIBELLULIDAE.

Macromiinae.

21. *MACROMIA ILLINOIENSIS* Walsh. Cromwell Bridge, Lock Raven, Baltimore Co., July 7, 1 ♀. Big Paint Creek, Montgomery Co., Sept. 2, 1 nymph.

22. *M. TAENIOLATA* Rambur. [See Hagen 1861, Banks 1892, Calvert 1893.]

Cordulinae.

23. *EPICORDULIA PRINCEPS* (Hagen). Otter Pt. near Abington, Harford Co., May 21, exuviae very common, 1 ♂, 1 ♀. [See Hagen 1861, 1874, 1875, Calvert 1893.]

Hundreds of exuviae were found among the water weeds washed up in the strand line. The nymphs were inhabitants of partially brackish water in this vicinity. No exuviae were found here on May 7.

24. *TETRAGONEURIA CYNOSURA* (Say). Rockland, Baltimore Co., June 15, 25 exuviae, 3 ♂, 2 ♀; Moore's Branch, Green Spring Ave., Baltimore Co., June 18, 2 ♂; (seen Notch Cliff, Baltimore Co., June 22; Lake Roland, Baltimore Co., May 25—July) [See Hagen 1875.]

Females were seen flying June 15 with large masses of eggs on the tips of their abdomens.

25. *SOMATOCHLORA TENEBROSA* (Say). [See Hagen 1875, Banks 1892.]

26. *S. FILOSA* (Hagen). [See Hagen 1874, 1875, Banks 1892, Calvert 1893.]

27. *S. ELONGATA* (Scudder). [See Walker 1925.]

28. *DOROCORDULIA LEPIDA* (Hagen). [See Hagen 1875, Banks 1892, Calvert 1893.]

Libellulinae.

29. *NANNOTHEMIS BELLA* (Uhler). Lakeshore, Anne Arundel Co., June 19, July 16, Aug. 4, very common. [See Uhler 1857, Hagen 1861, 1875, Banks 1892.]

This locality is a pitcher plant bog. Eggs were being laid June 19.

30. *PERITHEMIS DOMITIA TENERA* (Say). Moore's Branch, Green Spring Ave., Baltimore Co., July 11, 1 ♂; Dead Run, Colonial Park, Baltimore Co., July 9, 1 ♀; (seen Lake Roland,

Baltimore Co., June-July.) [See Hagen 1861, 1875, Ris 1903, 1910.]

31. *CELITHEMIS EPONINA* (Drury). Swan Creek, Anne Arundel Co., June 19, 2 ♂, 1 ♀; Eliot's Island, Dorchester Co., Aug. 24, 1 ♀. [See Hagen 1861, 1875, Ris 1903, 1912.]
In copulation June 19.

32. *C. ELISA* (Hagen). "Soldier's Delight", Baltimore Co., Sept. 11, 1 ♂; Swan Creek, Anne Arundel Co., June 19, 4 ♂, 2 ♀; Lakeshore, Anne Arundel Co., June 19, Aug. 4, 3 ♂; "Crimea", Baltimore City, June 4, 1 ♀. [See Hagen 1875.]

33. *C. MARTHA* Williamson. Lakeshore, Anne Arundel Co., Aug. 4, 2 ♂. [See Williamson 1922.]

34. *ERYTHRODIPLAX MINUSCULA* (Rambur). Lakeshore, Anne Arundel Co., Sept. 22, 2 ♂.

This is the northernmost record for this species, hitherto known north as far as Kentucky and North Carolina. The locality is a pitcher plant bog.

35. *E. BERENICE* (Drury). East Neck Island, Kent Co., May 28-Sept. 18, very common; Governor's Run, Calvert Co., July 7, 2 ♂; Eliot's Island, Dorchester Co., Aug. 24, very common. [See Drury 1770, Hagen 1861, 1875, Banks 1892, Ris 1903, 1911, Shortess 1929.]

This species is very common about brackish water. Many specimens could be swept into a net with each stroke at Eliot's Island.

36. *LIBELLULA LUCTUOSA* Burmeister. Common about most ponds, June-August. [See Hagen 1861, 1875, Banks 1892, Ris 1910.]

37. *L. AURIPENNIS* Burmeister. Linthecium, Anne Arundel Co., July 5, 1 ♂; Lakeshore, Anne Arundel Co., August 4, 1 ♂, (many seen); East Neck Island, Kent Co., July-August, common. [See Hagen 1861, 1875, Ris 1903, 1911, Calvert 1903.]

This species is commonly seen on the coastal plain but is apparently absent above the Fall Line.

38. *L. CYANEA* Fabricius, "The Caves", Baltimore Co., July 3, 2 ♂; Swan Creek, Anne Arundel Co., June 19, 2 ♂; East Neck Island, Kent Co., Aug. 25, 1 ♂; Gray's Swamp, Calvert Co., May 27, 1 ♂. (Seen Govans, Baltimore City, July 10.) [See Uhler 1857, Hagen 1861, 1875, Banks 1892, Calvert 1903, Ris 1910.]

(To be continued.)